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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,797	01/26/2004	Zhiping Shan	1094-47	9767
28249 7590 12/04/2007 DILWORTH & BARRESE, LLP 333 EARLE OVINGTON BLVD. SUITE 702 UNIONDALE, NY 11553			EXAMINER WARTALOWICZ, PAUL A	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 12/04/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/764,797		SHAN ET AL.	
	Examiner		Art Unit	
	Paul A. Wartalowicz		1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-23 and 25-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-23 and 25-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Withdrawn Rejections

The following rejections have been withdrawn: 35 USC 102(b) under 2002/0074263, 35 U.S.C. 112 of claim 21, 35 USC 102(b) under U.S. 5418298 .

Response to Arguments

Applicant's arguments filed 9/13/07 have been fully considered but they are not persuasive.

Applicant argues that Shan '486 teaches the use of organic precursors and not inorganic precursors.

However, Shan '486 teaches the starting material to be an inorganic oxide (see col. 2). The recitation in col. 5 indicating that the starting material is an organic is prefaced with "in a preferred embodiment...". This indicates to one of ordinary skill in the art at this is not a required and limiting aspect of the invention. Additionally, that the examples teach the use of organic precursors is not limiting on the taught inorganic oxides being starting materials.

Applicant argues that Shan '486 does not teach the reaction of the inorganic oxide with a complexation agent at the complexation temperature.

However, Shan '486 does teach the inorganic oxide reacted with the templating agent (col. 2-4). Shan '486 discloses that after the reaction, water is evaporated off such that the templating agent should have a boiling point above at least 150°C (col. 6). This teaching indicates that there is a step where some amount of complexation occurs that probably occurs at a temperature of at least 100°C. In instant claim 1 no

complexation temperature is recited, only that the inorganic oxide and complexing agent are reacted at a complexing temperature. It appears that Shan meets this limitation.

Furthermore, Shan '486 is not relied upon to teach the complexation temperature. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that Shan '486 does not teach recovery and recycling of the pore forming agent in addition to calcining of the inorganic oxide framework.

However, the instant claims recite recovery and recycling by solvent extraction. Shan '486 teaches that the templating agent (pore forming agent) is removed by extraction (col. 6). One of ordinary skill in the art would recognize that by removing the templating agent by extraction, recovery and recycling would be inherent.

Applicant argues that the disclosure of WO 00/15551 is similar to that of Shan '486 and also does not teach or suggest all of the features of Applicants' invention as claimed.

However, the above remarks are reiterated for WO 00/15551 and therefore the rejection is maintained.

Applicant argues that one skilled in the art would not find any suggestion to combine the teachings of Nakagawa with Shan given that Nakagawa explicitly affirms the unpredictability of the utility of templating agents.

However, there appears to be similar qualities in the templates used in Nakagawa and Shan '486: Nakagawa teach templating agents that comprise a quaternary ammonium compound that are constrained organic molecules (col. 5). Shan '486 teach that the templating agent comprises a quaternary ammonium compound and organic (col. 3).

Applicant argues that one cannot pick and choose reaction conditions from preparation of molecular sieves and apply them to preparation of mesoporous inorganic oxides.

However, both Shan and Nakagawa are drawn to methods of making large pore zeolites. Therefore, it appears that the disclosure of Nakagawa is combinable with Shan in the way set forth in the rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-3, 5, 7, 9-13, 16-23, 25-28 are rejected under 35 U.S.C. 102(b) as being anticipated by either U.S. (6358486) or WO 00/15551.

U.S. 6358486 teach a method for making an inorganic oxide comprising adding the claimed zeolite to the complex, the claimed source of inorganic oxide is reacted with the claimed complexing agent at a complexation temperature, aging, drying, and decomposing the complex by the claimed calcination temperature (Entire Document).

Claims 1-3, 5, 7, 9-13, 16-21 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/15551.

WO 00/15551 teach a method for making an inorganic oxide comprising the claimed source of inorganic oxide is reacted with the claimed complexing agent at a

complexation temperature, decomposing the complex by the claimed calcination temperature (Entire Document).

Claims 1-3, 5, 7, 9-13, 16-21 are rejected under 35 U.S.C. 102(a),(e) as being anticipated by any one of U.S. 6906208, U.S. 6814950, WO 2004/026473, and WO 2004/052537.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Any one of the references teach a method for making an inorganic oxide comprising the claimed source of inorganic oxide is reacted with the claimed complexing agent at a complexation temperature, decomposing the complex by the claimed calcination temperature (Entire Document).

Claims 1-3, 5, 7, 9-13, 15-23, 25-28 are rejected under 35 U.S.C. 102(a),(e) as being anticipated by U.S. 7084087.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome

either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

U.S. 7084087 teach a method for making an inorganic oxide comprising adding the claimed zeolite to the complex, the claimed source of inorganic oxide is reacted with the claimed complexing agent at a complexation temperature, aging, drying, and decomposing the complex by the claimed hydrolysis and calcination temperature (Entire Document).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 6, 8, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable any one of U.S. 2002/0074263, U.S. 7084087, U.S. 6358486, U.S. 6906208, and U.S.

6814950, WO 00/15551, WO 2004/026473, and WO 2004/052537 in view of Nakagawa (U.S. 5273736).

U.S. 2002/0074263, U.S. 7084087, U.S. 6358486, U.S. 6906208, and U.S. 6814950, WO 00/15551, WO 2004/026473, and WO 2004/052537 teach a method for making a microporous zeolite embedded in a mesoporous support as described above.

U.S. 2002/0074263, U.S. 7084087, U.S. 6358486, U.S. 6906208, and U.S. 6814950, WO 00/15551, WO 2004/026473, and WO 2004/052537 fail to teach wherein the source of inorganic oxide is silica source as claimed and wherein the source of inorganic oxide is the claimed magnesium compound.

Nakagawa, however, teach a method for making large pore zeolites (col. 1) comprising reacting fumed silica, magnesium hydroxide with a templating agent at a temperature of 100-235°C (col. 5, 7, and 8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide reacting fumed silica and magnesium hydroxide with a templating agent at a temperature of 100-235°C (col. 5, 7, and 8) in U.S. 2002/0074263, U.S. 7084087, U.S. 6358486, U.S. 6906208, and U.S. 6814950, WO 00/15551, WO 2004/026473, and WO 2004/052537 because it is well-known in the art to do so as taught by Nakagawa.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of U.S. 2002/0074263, U.S. 7084087, U.S. 6358486, U.S. 6906208, and

U.S. 6814950, WO 00/15551 WO 2004/026473, and WO 2004/052537, in view of Kresge et al. (U.S. 5250277).

U.S. 2002/0074263, U.S. 7084087, U.S. 6358486, U.S. 6906208, and U.S. 6814950, WO 00/15551, WO 2004/026473, and WO 2004/052537 teach a method for making a microporous zeolite embedded in a mesoporous support as described above.

U.S. 2002/0074263, U.S. 7084087, U.S. 6358486, U.S. 6906208, and U.S. 6814950, WO 00/15551, WO 2004/026473, and WO 2004/052537 teach that hydrolysis occurs and is completed and that calcination occurs at a temperature of 300-1000°C. This is believed to inherently teach the limitations of claims 15 and 16.

If U.S. 2002/0074263, U.S. 7084087, U.S. 6358486, U.S. 6906208, and U.S. 6814950, WO 00/15551, WO 2004/026473, and WO 2004/052537 fail to teach these limitations, Kresge et al., teach a method of making porous (col. 14) crystalline oxides (col. 1) comprising hydrolysis and/or calcination is used to produce porous precursor pillars of an oxide, (col. 11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide hydrolysis and/or calcination in U.S. 2002/0074263, U.S. 7084087, U.S. 6358486, U.S. 6906208, and U.S. 6814950, WO 00/15551, WO 2004/026473, and WO 2004/052537 in order to produce porous precursor pillars of an oxide, (col. 11) as taught by Kresge et al.

Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laine et al. (U.S. 5418298) in view of Shan et al. (U.S. 2002/0074263).

Laine et al. teach a method of making a porous article as described above.

Laine et al. fail to teach that the source of inorganic oxide comprises tetraethylorthosilicate and aluminum isopropoxide, silatrane, alumatrane and titanatrane.

Shan et al. teach a method for making a microporous zeolite embedded in a mesoporous support (paragraph 0003) comprising the zeolite is incorporated into the mesoporous support (paragraph 0015) and reacting alumina or aluminum isopropoxide (paragraph 0017 & 0021) with a glycol and triethanolamine (paragraph 0018 & 0022).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide the source of inorganic oxide is aluminum isopropoxide (paragraph 0017 & 0021) in Laine et al. because it is well known in the art to do so in a substantially similar process (paragraph 0018 & 0022) as taught by Shan et al.

Additionally, Shan et al. teach that it is known to carry out solvent extraction with ethanol (paragraph 0028).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide solvent extraction with ethanol (paragraph 0028) in Laine et al. because it is a well-known method of extraction in the art as taught by Shan et al.

Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laine et al. (U.S. 5418298) in view of Nakagawa (U.S. 5273736).

Laine et al. teach a method of making a porous article as described above.

Laine et al. fail to teach wherein the source of inorganic oxide is silica source as claimed and wherein the source of inorganic oxide is the claimed magnesium compound.

Nakagawa, however, teach a method for making large pore zeolites (col. 1) comprising reacting fumed silica, magnesium hydroxide with a templating agent at a temperature of 100-235°C (col. 5, 7, and 8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide reacting fumed silica and magnesium hydroxide with a templating agent at a temperature of 100-235°C (col. 5, 7, and 8) in Laine et al. because it is well-known in the art to do so as taught by Nakagawa.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Wartalowicz whose telephone number is (571) 272-5957. The examiner can normally be reached on 8:30-6 M-Th and 8:30-5 on Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Paul Wartalowicz
November 30, 2007

/Steven Bos/
Steven Bos
Primary Examiner
A.U. 1793